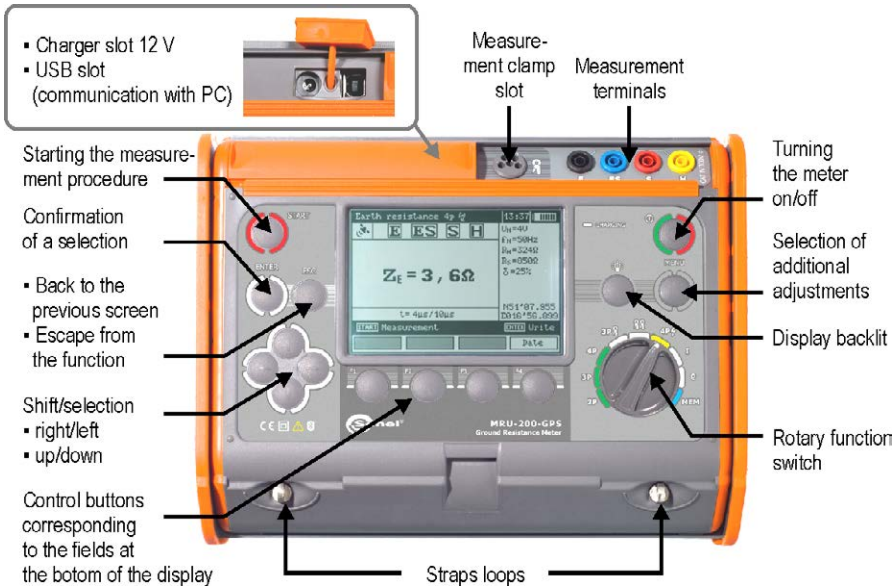




The meter is designed for measurements at interference voltages which do not exceed 24 V for R_E measurements and 3 V for R_{CONT} measurements. The voltage is measured up to 100 V, but above 40 V is indicated as dangerous. The meter must not be connected to voltages exceeding 100 V.



$U_m > 24V!$ The voltage on the measurement points exceeds 24 V but is lower than 40 V. The measurement is blocked.

$U_m > 40V!$ The voltage on the measurement points exceeds 40 V. The measurement is blocked and a continuous sonic signal.

NOISE! The value of the interfering signal is too high. The result may be distorted by additional uncertainty.

$R > 19,99k\Omega$
 $R_E > 19,99k\Omega$
 $R_s > 19,9k\Omega$
 $R_p > 19,9k\Omega$
 $\rho > 999k\Omega m$

Measurement range exceeded.

LIMIT! The uncertainty of the electrode resistance >30%. Uncertainties calculated on the basis of the measured values.

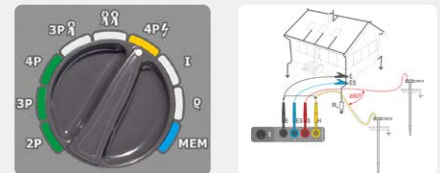
$I_L > max$ Excessive interfering current, the measurement error may exceed the basic error.

First steps

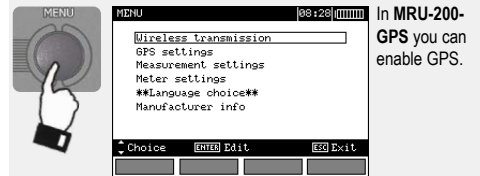
1 Turn on the meter



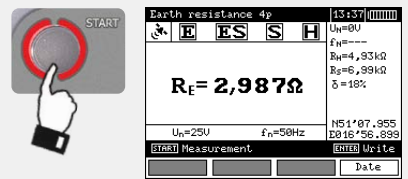
2 Select the method and connect



3 Configure



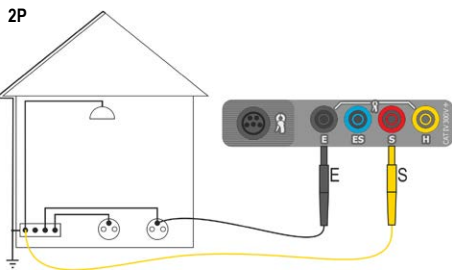
4 Obtain the result



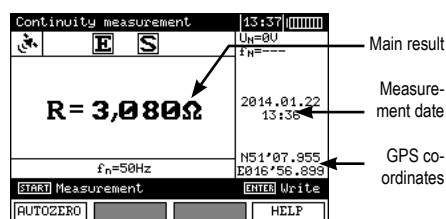
Measurements

Wire continuity measurement

Connect the meter to the measured wire.



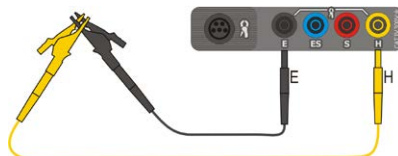
Run the measurement using **START** button.



In order to eliminate the influence of the resistance of the test leads over the result of the measurement, its compensation (auto-zeroing) has to be done.

Enabling auto-zeroing

Using button **F1** enable **AUTOZERO** mode. Short-circuit the test leads.



Press **START**.

Disabling auto-zeroing

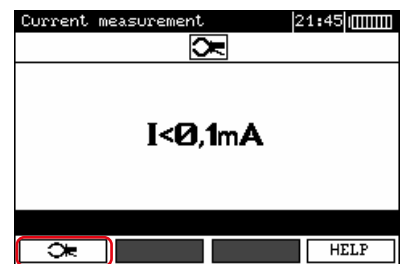
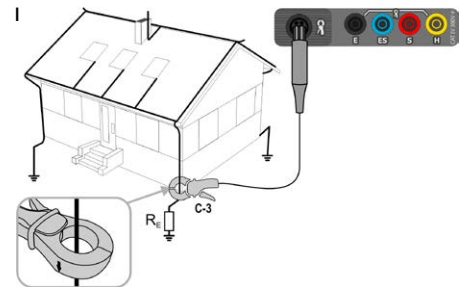
Using button **F1** enable **AUTOZERO** mode. Separate the test leads.

Press **START**.

It is sufficient to realize compensation once for the given test leads. It is also remembered once the meter has been turned off, until the next successful auto-reset procedure.

Current measurement

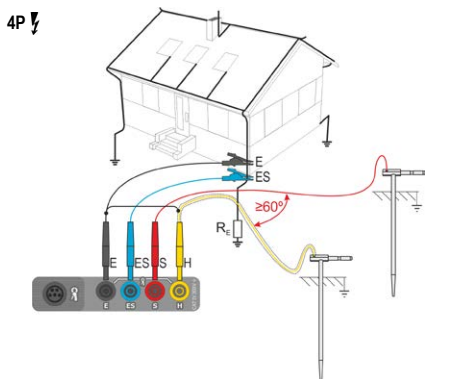
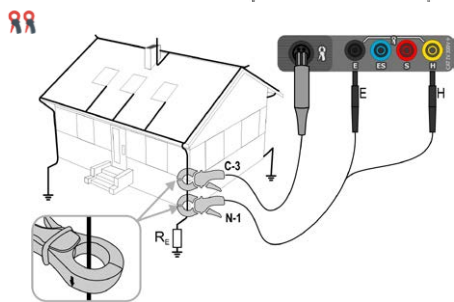
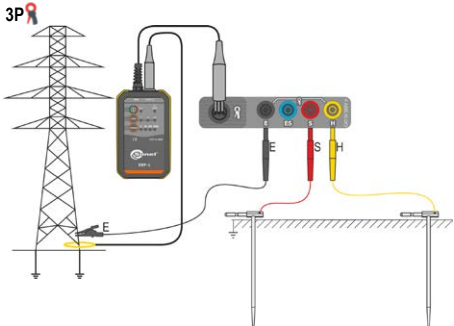
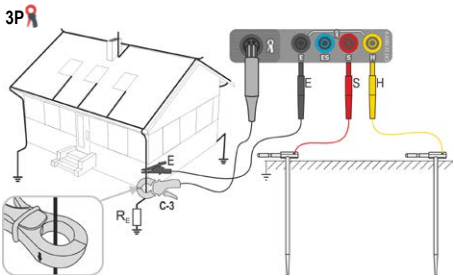
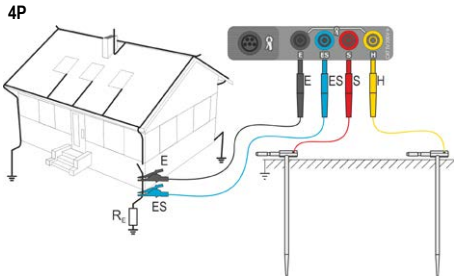
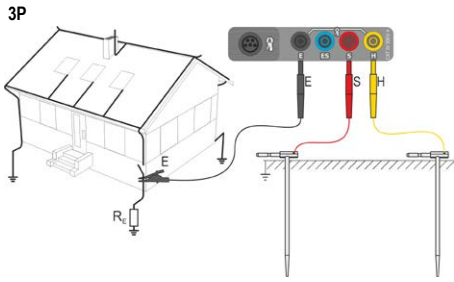
Connect the meter to the measured object using clamp.



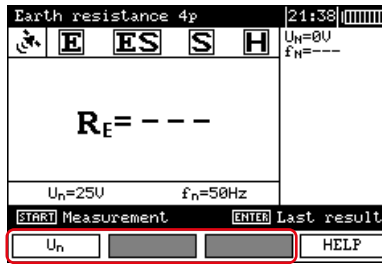
F1 select the type of clamp

Using **START** button run the measurement.

Earth resistance measurement R_E



Configuration and R_E measurement



Enter settings

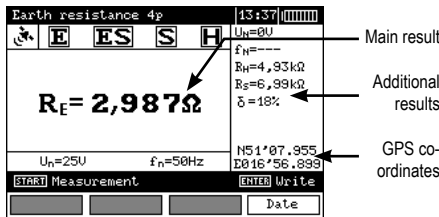
- F1 voltage/pulse shape
- F2 selection of C-3/ERP-1 (3P+clamp method)
- F3 selection of the number of pole legs (ERP-1)



Using button **START** run the measurement.



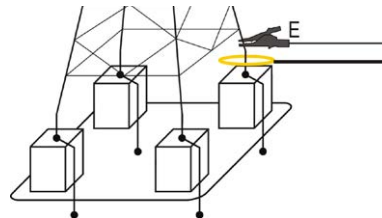
Using button **F4** display coordinates of the measured point.



- U_n voltage on the measurement points
- f_n interference frequency
- I_n interfering current
- R_n resistance of current electrode
- R_s resistance of voltage electrode
- δ additional uncertainty caused by the resistance of the electrodes
- $R_1 \dots R_n$ earth resistance of the pole leg no. 1...4

Measurement of R_E of poles using ERP-1 adapter

Connect the meter to the leg of the measured pole.



ERP-1

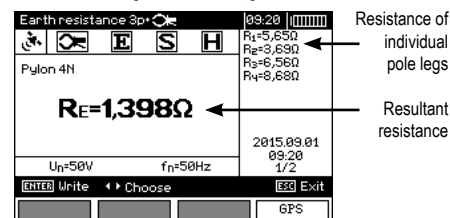
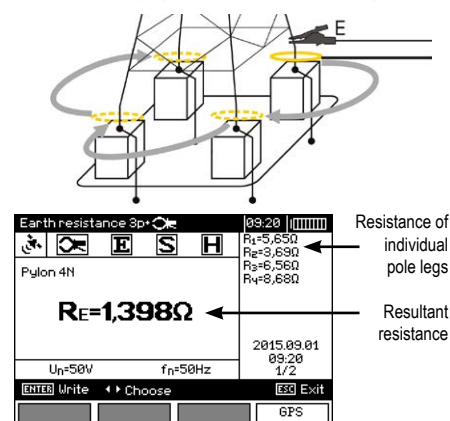
- FLEX** Using **FLEX** button select the type of flexible clamps connected to the device.
- TURNS** Using **TURNS** button select the number of flexible clamp wraps around the pole leg.

MRU-200 / MRU-200-GPS

Press **F2** and select ERP-1 adapter.



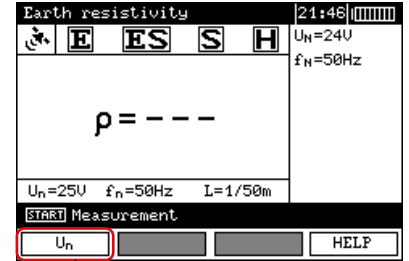
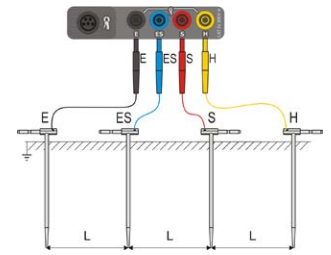
Using **START** button run the measurement. Wrap the clamps around next legs according to instructions on the display. Keep one direction of connecting to pole legs (clockwise or counter-clockwise).



- Resistance of individual pole legs
- Resultant resistance

Earth resistivity measurement

Connect the meter to the measured earth.



Enter settings

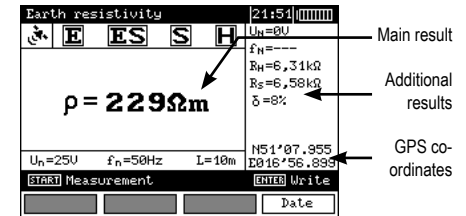
- F1 measuring voltage



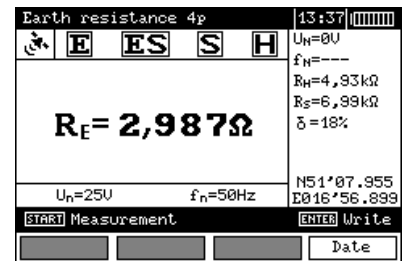
Press **START**. Using buttons **▲ ▼** enter the distance between electrodes.



Using button **ENTER** run the measurement.



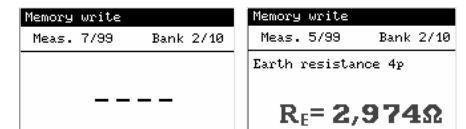
Saving a result to the memory



After the measurement press **ENTER**.



Select memory cell using buttons **▲ ▼**. Select memory bank using buttons **◀ ▶**.



Target cell empty

Target cell occupied



Press **ENTER** to save the result.



Find more information in the user manual and on our website www.sonel.com